

What Is Claimed Is:

1           1. In an adaptive speed control system for  
2 a vehicle, a method for controlling vehicle  
3 deceleration, the method comprising:  
4           determining a speed of the vehicle; and  
5           setting a maximum allowed vehicle  
6 deceleration based on the vehicle speed determined.

1           2. The method of claim 1 wherein setting a  
2 maximum allowed vehicle deceleration based on the  
3 vehicle speed includes adjusting the maximum allowed  
4 vehicle deceleration in an inverse relationship to the  
5 vehicle speed.

1           3. The method of claim 2 wherein adjusting  
2 the maximum allowed vehicle deceleration comprises  
3 decreasing the maximum allowed vehicle deceleration as  
4 the vehicle speed increases.

1           4. The method of claim 2 wherein adjusting  
2 the maximum allowed vehicle deceleration comprises  
3 increasing the maximum allowed vehicle deceleration as  
4 the vehicle speed decreases.

1           5. The method of claim 2 wherein the  
2 maximum allowed vehicle deceleration is capable of  
3 varying continuously.

1           6. The method of claim 5 wherein the  
2 maximum allowed vehicle deceleration is capable of  
3 varying in a range between about 0.2 g and about  
4 0.3 g.

1           7. The method of claim 2 wherein the  
2 maximum allowed vehicle deceleration is an exponential  
3 function of the vehicle speed.

1           8. The method of claim 7 wherein the  
2 maximum allowed vehicle deceleration is defined by the  
3 equation:

4                           
$$\text{MAXDECEL} = 0.2 + 160/(\text{VEHSPD} + 40)^2,$$

5           where MAXDECEL is the maximum allowed vehicle  
6 deceleration, and VEHSPD is the vehicle speed.

1           9. In an adaptive speed control system for  
2 a vehicle, a system for controlling vehicle  
3 deceleration, the system comprising:

4                   a receiver capable of receiving an input  
5 signal indicative of a speed of the vehicle; and

6                   a controller capable of setting a maximum  
7 allowed vehicle deceleration based on the vehicle  
8 speed.

1           10. The system of claim 9 wherein, to set a  
2 maximum allowed vehicle deceleration based on the

3 vehicle speed, the controller is capable of adjusting  
4 the maximum allowed vehicle deceleration in an inverse  
5 relationship to the vehicle speed.

1 11. The system of claim 10 wherein, to  
2 adjust the maximum allowed vehicle deceleration, the  
3 controller is capable of decreasing the maximum  
4 allowed vehicle deceleration as the vehicle speed  
5 increases.

1 12. The system of claim 10 wherein, to  
2 adjust the maximum allowed vehicle deceleration, the  
3 controller is capable of increasing the maximum  
4 allowed vehicle deceleration as the vehicle speed  
5 decreases.

1 13. The system of claim 10 wherein the  
2 maximum allowed vehicle deceleration is capable of  
3 varying continuously.

1 14. The system of claim 13 wherein the  
2 maximum allowed vehicle deceleration is capable of  
3 varying in a range between about 0.2 g and about  
4 0.3 g.

1 15. The system of claim 10 wherein the  
2 maximum allowed vehicle deceleration is an exponential  
3 function of the vehicle speed.

